Certification Of Conformity
On Behalf of
Shenzhen Peilin Sports Technology Company Ltd.

ROPE SKIPPING AUTO DETECTION SYSTEM
Model No.: PL-007

Prepared for	:	Shenzhen Peilin Sports Technology Company Ltd.
Address	:	No.28, Industrial North district of XinHe Community, Fuyong Town, BaoAn District, Shenzhen, China. 518103
Prepared By	:	Coffee-T Electronics Technology Co Ltd
Address	:	Unit 12, 8F Honghai Building,Qianhai Road,Nanshan,Shenzhen,China +86-755-86622903 +86-755-86622819

Report Number	:	CTE13GR-218F
Date of Test	:	Jul. 11~ Jul. 25, 2013
Date of Report	:	Jul. 25, 2013

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TEST REPORT CERTIFICATION

Applicant	:	Shenzhen Peilin Sports Technology Company Ltd.
Manufacturer	:	Shenzhen Peilin Sports Technology Company Ltd.
EUT	:	Rope Skipping Auto Detection System
Model No.	:	PL-007
Rating	:	Input: AC 100-240V, 50-60Hz for adapter Output: DC 12V, 3A
Trade Mark	:	N/AM

Measurement Procedure Used:

FCC Rules and Regulations Part 15 Subpart B 2011 & FCC / ANSI C63.4-2009

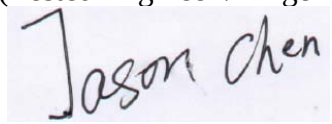
The device described above is tested by Coffee-T Electronics Technology Co Ltd to determine the maximum emission levels emanating from the device and the severe levels of the device can endure and its performance criterion. The measurement results are contained in this test report and Coffee-T Electronics Technology Co Ltd is assumed full of responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT (Equipment Under Test) is technically compliant with the FCC Part 15 Subpart C requirements.

This report applies to above tested sample only and shall not be reproduced in part without written approval of Coffee-T Electronics Technology Co Ltd

Date of Test : Jul. 11~ Jul. 25, 2013

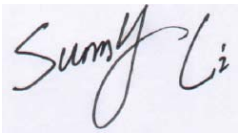
Prepared by : _____

(Tested Engineer / Angel wu)



Reviewer : _____

(Project Manager /Jason Chen)



Approved & Authorized Signer : _____

(Manager / Sumy li)

1. GENERAL INFORMATION

1.1. Description of Device (EUT)

EUT : Rope Skipping Auto Detection System

Model Number : PL-007

Test Power Supply : Input: AC 100-240V, 50-60Hz for adapter
Output: DC 12V, 3A

Applicant : Shenzhen Peilin Sports Technology Company Ltd.
Address : No.28, Industrial North district of XinHe Community, Fuyong Town, BaoAn District, Shenzhen, China. 51810

Manufacturer : Shenzhen Peilin Sports Technology Company Ltd.
Address : No.28, Industrial North district of XinHe Community, Fuyong Town, BaoAn District, Shenzhen, China. 51810

Date of receipt : Jul. 11, 2013

Date of Test : Jul. 11~ Jul. 25, 2013

Attachment Description

	Accessory	Function	Remark
1	Speaker	Playing Music	/
2	Blanket	Rope skipping on it	/
3	Hand Shank	Used for rope skipping	only use one when rope skipping
4	Scanner	Bar code scanning	Scanning the student ID barcode into computer
5	Wire Stock	Multicore cables	connect the host and other parts
6	Card Reader	RFID Reader	Read the RFID electronic tag on the vice hand shank

1.2. Description of Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

CNAS - LAB Code: L3503
Anbotek Compliance Laboratory Limited., Laboratory has been assessed and in compliance with CNAS/CL01: 2006 accreditation criteria for testing laboratories (identical to ISO/IEC 17025:2005 General Requirements) for the Competence of Testing Laboratories.

FCC-Registration No.: 752021
Anbotek Compliance Laboratory Limited, EMC Laboratory has been registed and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration 752021, August 20, 2010.

1.3. Measurement Uncertainty

Radiation Uncertainty : Ur = 4.3dB

Conduction Uncertainty : Uc = 3.4dB

1.4. Test Summary

For the EUT described above. The standards used were FCC Part 15 Subpart B for Emissions.

Table 1 : Tests Carried Out Under FCC Part 15 Subpart B

Standard	Test Items	Status
FCC Part 15 Subpart B	Power Line Conducted Emission Test (150KHz To 30MHz)	√
FCC Part 15 Subpart B	Radiated Emission Test (30MHz To 1000MHz)	√

√ Indicates that the test is applicable

x Indicates that the test is not applicable

2. POWER LINE CONDUCTED MEASUREMENT

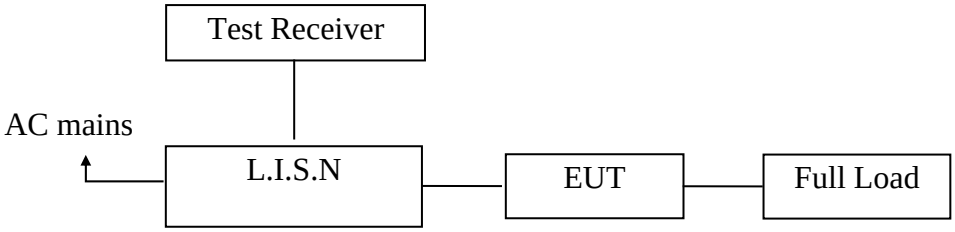
2.1. Test Equipment

The following test equipments are used during the power line conducted measurement:

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Two-Line V-network	Rohde & Schwarz	ENV216	10055	Apr. 23, 2013	1 Year
2.	EMI Test Receiver	Rohde & Schwarz	ESCI	100627	Apr. 23, 2013	1 Year
3.	RF Switching Unit	Compliance Direction	RSU-M2	38303	Apr. 23, 2013	1 Year

2.2. Block Diagram of Test Setup

2.2.1. Block diagram of connection between the EUT and simulators



(EUT: Rope Skipping Auto Detection System)

2.3. Power Line Conducted Emission Measurement Limits (FCC Part 15 Class B)

Frequency MHz	Limits dB(μV)	
	Quasi-peak Level	Average Level
0.15 ~ 0.50	66 ~ 56*	56 ~ 46*
0.50 ~ 5.00	56	46
5.00 ~ 30.00	60	50

Notes: 1. *Decreasing linearly with logarithm of frequency.
2. The lower limit shall apply at the transition frequencies.

2.4. Configuration of EUT on Measurement

The following equipments are installed on Power Line Conducted Emission Measurement to meet the commission requirement and operating regulations in a manner which tends to maximize its emission characteristics in a normal application.

EUT	:	Rope Skipping Auto Detection System
Model Number	:	PL-007
Applicant	:	Shenzhen Peilin Sports Technology Company Ltd.

2.5. Operating Condition of EUT

2.5.1. Setup the EUT and simulator as shown as Section 2.2.
2.5.2. Turn on the power of all equipment.
2.5.3. Let the EUT work in test mode (Full Load) and measure it.

2.6. Test Procedure

The EUT system is connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm coupling impedance for the EUT system. Please refer the block diagram of the test setup and photographs. Both sides of AC line are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to FCC ANSI C63.4-2009 on Conducted Emission Measurement.

The bandwidth of test receiver (ESCI) set at 9KHz.

The frequency range from 150KHz to 30MHz is checked.

The test result are reported on Section 2.7.

2.7. Power Line Conducted Emission Measurement Results

PASS.

The frequency range from 150KHz to 30 MHz is investigated.

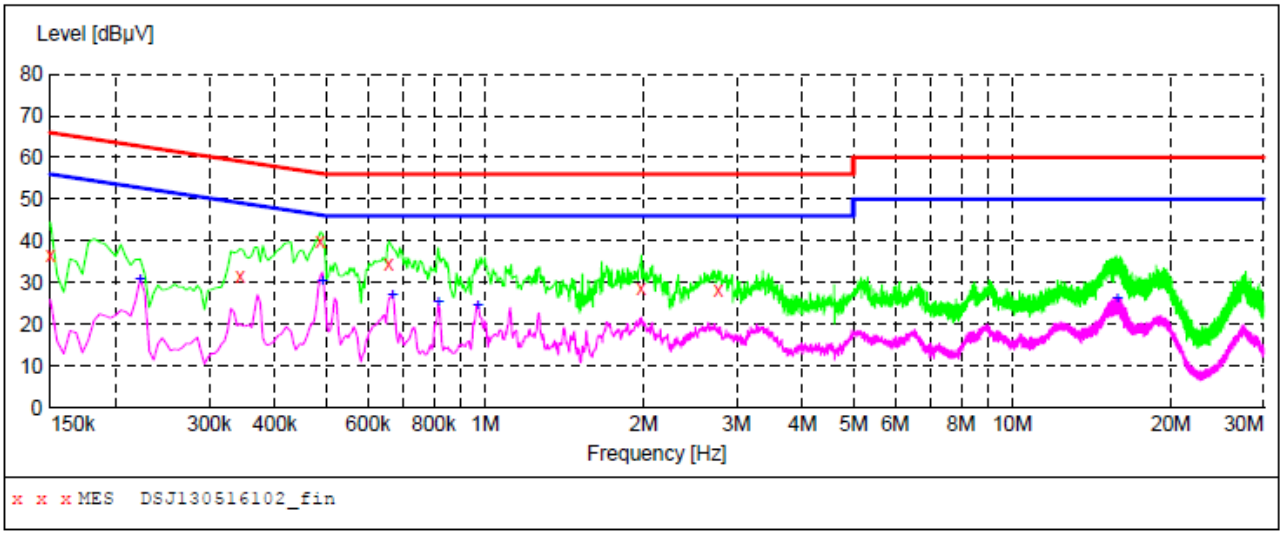
The test curves are shown in the following pages.

CONDUCTED EMISSION TEST DATA

EUT:	Rope Skipping Auto Detection System	M/N:PL-007
Operating Condition:	ON	
Test Site:	1# Shielded Room	
Operator:	Finley Li	
Test Specification:	AC 120V, 60Hz	
Comment:	N	
	Tem:25℃ Hum:50%	

SCAN TABLE: "Voltage(150K~30M)FIN"

Short Description: 150K-30M Disturbance Voltages



MEASUREMENT RESULT: "DSJ130516102_fin"

7/13/2013 2:59PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.150000	36.40	20.1	66	29.6	QP	N	GND
0.343500	31.70	20.1	59	27.4	QP	N	GND
0.487500	40.10	20.1	56	16.1	QP	N	GND
0.658500	34.70	20.1	56	21.3	QP	N	GND
1.981000	28.70	20.3	56	27.3	QP	N	GND
2.773000	28.30	20.4	56	27.7	QP	N	GND

MEASUREMENT RESULT: "DSJ130516102_fin2"

7/13/2013 2:59PM

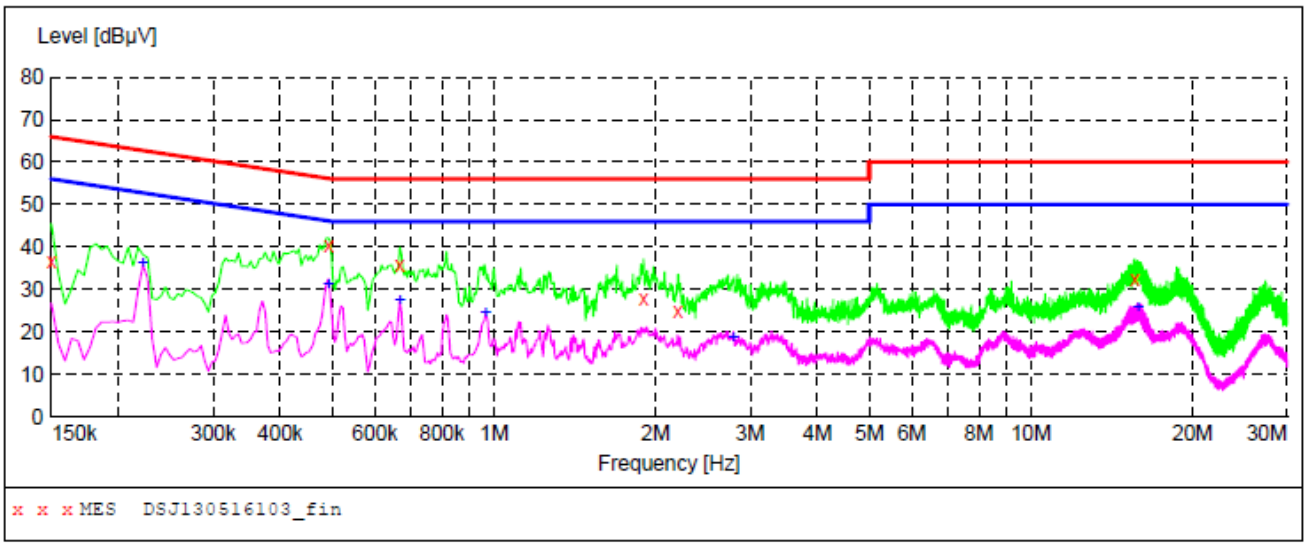
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.222000	30.80	20.1	53	21.9	AV	N	GND
0.492000	30.20	20.1	46	15.9	AV	N	GND
0.667500	27.10	20.1	46	18.9	AV	N	GND
0.816000	25.40	20.1	46	20.6	AV	N	GND
0.969000	24.40	20.2	46	21.6	AV	N	GND
15.827500	26.00	20.7	50	24.0	AV	N	GND

CONDUCTED EMISSION TEST DATA

EUT:	Rope Skipping Auto Detection System	M/N:PL-007
Operating Condition:	ON	
Test Site:	1# Shielded Room	
Operator:	Finley Li	
Test Specification:	AC 120V, 60Hz	
Comment:	L	
	Tem:25℃ Hum:50%	

SCAN TABLE: "Voltage(150K~30M)FIN"

Short Description: 150K-30M Disturbance Voltages



MEASUREMENT RESULT: "DSJ130516103_fin"

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Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.150000	36.50	20.1	66	29.5	QP	L1	GND
0.492000	40.30	20.1	56	15.8	QP	L1	GND
0.667500	35.90	20.1	56	20.1	QP	L1	GND
1.900000	28.00	20.3	56	28.0	QP	L1	GND
2.201500	25.00	20.3	56	31.0	QP	L1	GND
15.598000	32.60	20.7	60	27.4	QP	L1	GND

MEASUREMENT RESULT: "DSJ130516103_fin2"

7/13/2013 3:02PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.222000	36.00	20.1	53	16.7	AV	L1	GND
0.492000	31.30	20.1	46	14.8	AV	L1	GND
0.667500	27.50	20.1	46	18.5	AV	L1	GND
0.964500	24.50	20.2	46	21.5	AV	L1	GND
2.791000	18.70	20.4	46	27.3	AV	L1	GND
15.818500	25.80	20.7	50	24.2	AV	L1	GND

3.RADIATED EMISSION MEASUREMENT

3.1. Test Equipment

The following test equipments are used during the radiated emission measurement:

3.1.1. For Anechoic Chamber

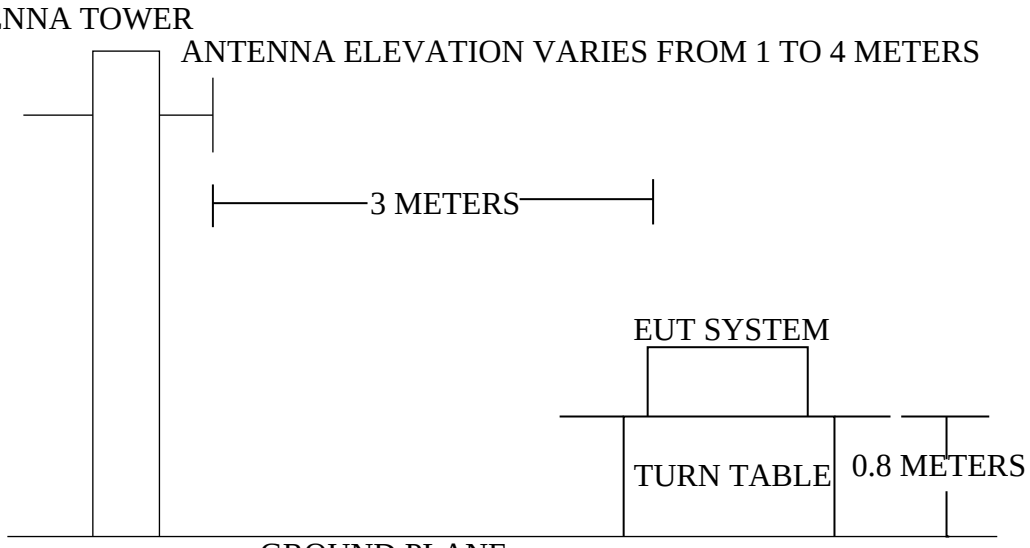
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Bilog Broadband Antenna	Schwarzbeck	VULB9163	VULB 9163-289	Apr. 23, 2013	1 Year
2.	EMI Test Receiver	Rohde & Schwarz	ESPI	101604	Apr. 23, 2013	1 Year
3.	Pre-amplifier	SONOMA	310N	186860	Apr. 23, 2013	1 Year

3.2. Block Diagram of Test Setup

3.2.1. Block diagram of connection between the EUT and simulators

(EUT: Rope Skipping Auto Detection System)

3.2.2. Anechoic Chamber Test Setup Diagram



(EUT: Rope Skipping Auto Detection System)

3.3. Radiated Emission Limit (Subpart B Class B)

FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMIT	
		μV/m	dB(μV)/m
30~88	3	100	40.0
88~216	3	150	43.5
216~960	3	200	46.0
960~1000	3	500	54.0

FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMIT	
		PK dB(μV)/m	AV dB(μV)/m
1000~3000	3	74.0	54.0

Remark： (1) Emission level (dB)μV = 20 log Emission level μV/m

(2) The smaller limit shall apply at the cross point between two frequency bands.

(3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.

3.4. EUT Configuration on Measurement

The following equipments are installed on Radiated Emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

EUT	:	Rope Skipping Auto Detection System
Model Number	:	PL-007
Applicant	:	Shenzhen Peilin Sports Technology Company Ltd.

3.5. Operating Condition of EUT

3.5.1. Setup the EUT as shown in Section 3.2.

3.5.2. Let the EUT work in test mode (Full Load) and measure it.

3.6. Test Procedure

EUT and its simulators are placed on a turn table, which is 0.8 meter high above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on a antenna tower. The antenna can be moved up and down between 1.0 meter and 4 meters to find out the maximum emission level. Broadband antenna (Trilog Broadband Antenna) is used as receiving antenna. Both horizontal and vertical polarizations of the antenna are set on measurement. In order to find the maximum emission levels, all of the interface cables must be manipulated according to ANSI C63.4-2009 on radiated emission measurement.

The bandwidth of the EMI test receiver (ESCI) is set at 120kHz.

The frequency range from 30MHz to 1000MHz is checked.

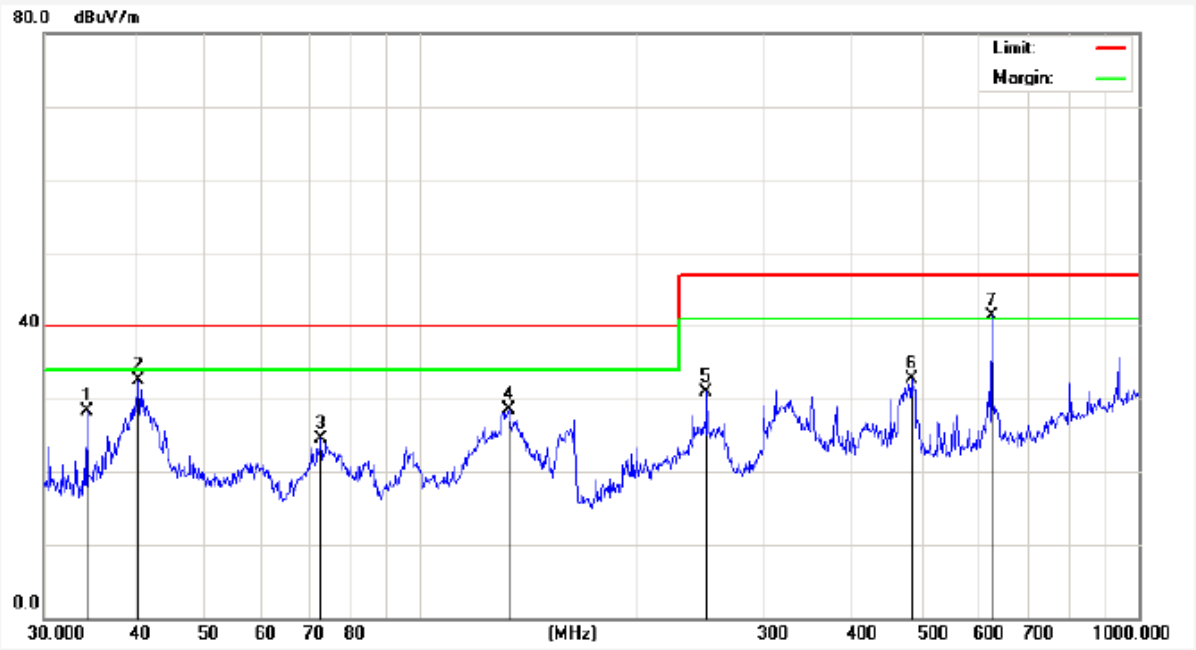
The test mode (Full Load) is tested in chamber and all the test results are listed in Section 3.7.

3.7. Radiated Emission Measurement Results

PASS.

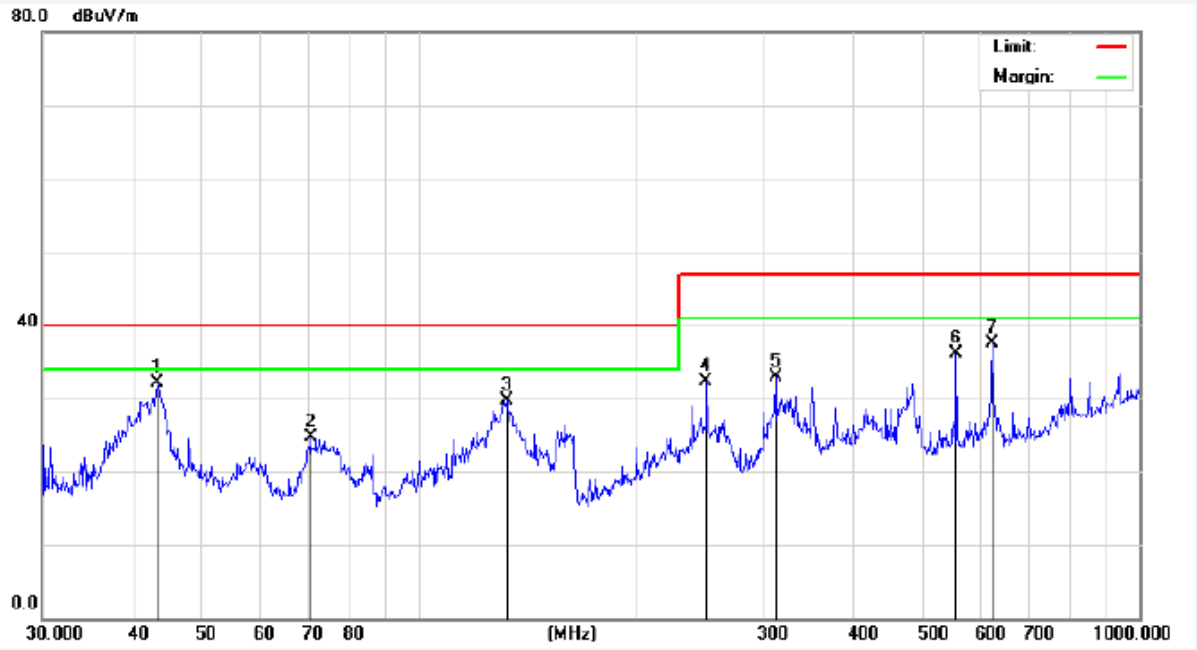
The test curves are shown in the following pages.

Job No.:	**CTE13GR-219F**	**Polarization:**	**Horizontal**
Standard:	**(RE)FCC PART15 B _3m**	**Power Source:**	**AC 120V, 60Hz**
Test item:	**Radiation Test**	**Date:**	**2013/07/19**
Temp.(C)/Hum.(%RH):	**24.3(C)/55%RH**	**Time:**	**18:21:34**
EUT:	**Rope Skipping Auto Detection System**	**Test By:**	**Jimly Chen**
Model:	**PL-007**	**Distance:**	**3m**
Note:	**ON**		



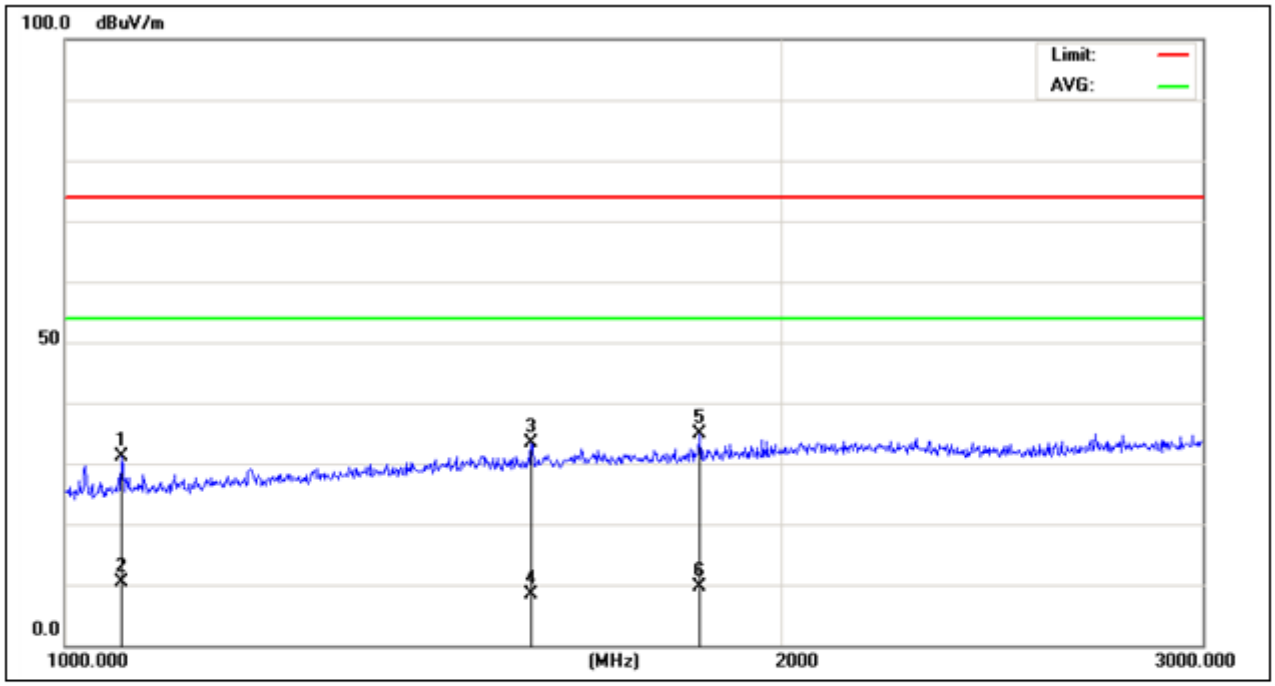
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	34.3964	42.93	-14.61	28.32	40.00	-11.68	peak			
2	40.5591	43.10	-10.58	32.52	40.00	-7.48	peak			
3	72.8466	44.69	-20.17	24.52	40.00	-15.48	peak			
4	132.6850	46.43	-18.00	28.43	40.00	-11.57	peak			
5	250.3012	44.97	-14.04	30.93	47.00	-16.07	peak			
6	482.2156	44.19	-11.47	32.72	47.00	-14.28	peak			
7	623.9980	50.34	-9.04	41.30	47.00	-5.70	QP	100	0	

Job No.:	**CTE13GR-219F**	**Polarization:**	**Vertical**
Standard:	**(RE)FCC PART15 B _3m**	**Power Source:**	**AC 120V, 60Hz**
Test item:	**Radiation Test**	**Date:**	**2013/07/19**
Temp.(C)/Hum.(%RH):	**24.3(C)/55%RH**	**Time:**	**18:13:46**
EUT:	**Rope Skipping Auto Detection System**	**Test By:**	**Jimly Chen**
Model:	**PL-007**	**Distance:**	**3m**
Note:	**ON**		



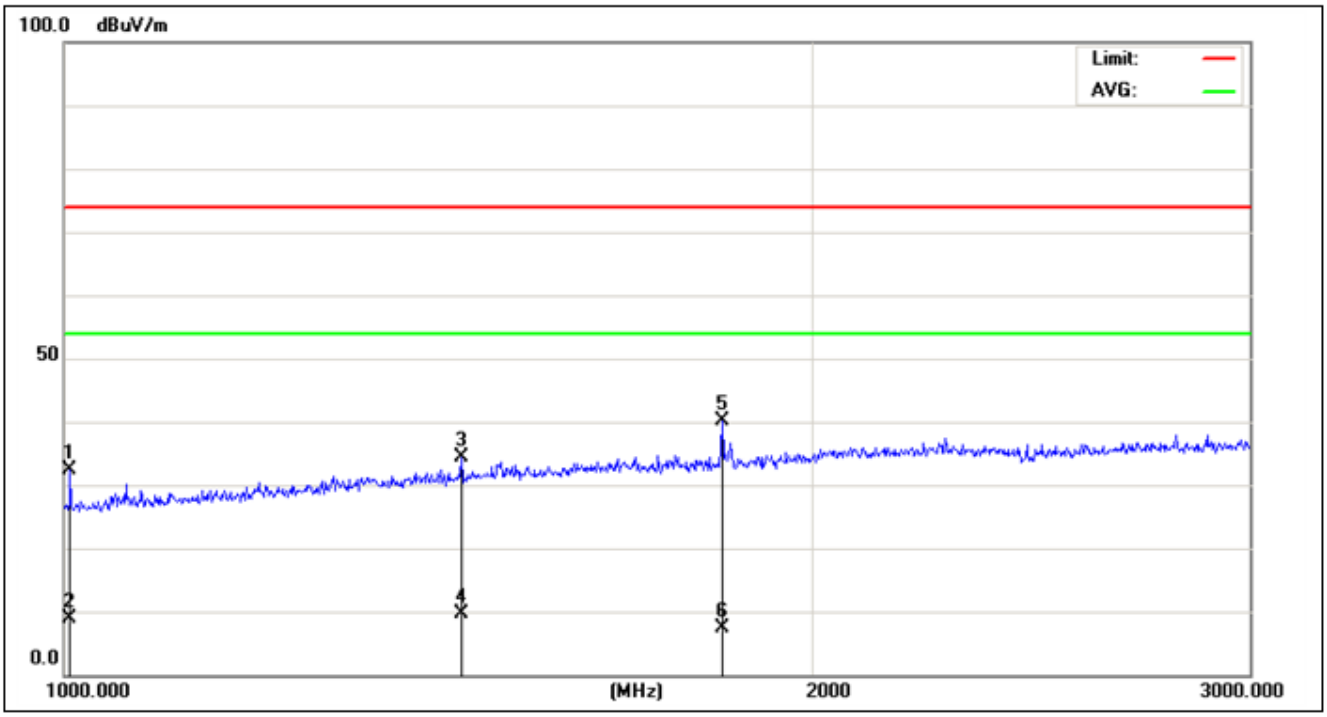
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	43.3534	43.87	-11.68	32.19	40.00	-7.81	peak			
2	70.5836	44.52	-19.74	24.78	40.00	-15.22	peak			
3	132.2206	47.74	-17.96	29.78	40.00	-10.22	peak			
4	250.3012	46.34	-14.04	32.30	47.00	-14.70	peak			
5	312.1794	47.27	-14.43	32.84	47.00	-14.16	peak			
6	556.7744	46.07	-9.99	36.08	47.00	-10.92	peak			
7	625.0780	46.60	-9.05	37.55	47.00	-9.45	peak			

Job No.:	**CTE13GR-219F**	**Polarization:**	**Horizontal**
Standard:	**(RE)FCC PART15 B _3m**	**Power Source:**	**AC 120V, 60Hz**
Test item:	**Radiation Test**	**Date:**	**2013/07/25**
Temp.(C)/Hum.(%RH):	**24.3(C)/55%RH**	**Time:**	**15:21:34**
EUT:	**Rope Skipping Auto Detection System**	**Test By:**	**Jimly Chen**
Model:	**PL-007**	**Distance:**	**3m**
Note:	**ON**		



No.	Frequency	Reading	Correct	Result	Limit	Over Limit	Detector	Height	Degree
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)		(cm)	(deg)
1	1056.467	46.02	-14.80	31.22	74.00	-42.78	peak		
2	1056.467	25.17	-14.80	10.37	54.00	-43.63	AVG	300	360
3	1568.988	43.70	-10.20	33.50	74.00	-40.50	peak		
4	1568.988	18.57	-10.20	8.37	54.00	-45.63	AVG	300	0
5	1846.008	43.40	-8.60	34.80	74.00	-39.20	peak		
6	1846.008	18.22	-8.60	9.62	54.00	-44.38	AVG	300	360

Job No.:	**CTE13GR-219F**	**Polarization:**	**Vertical**
Standard:	**(RE)FCC PART15 B _3m**	**Power Source:**	**AC 120V, 60Hz**
Test item:	**Radiation Test**	**Date:**	**2013/07/25**
Temp.(C)/Hum.(%RH):	**24.3(C)/55%RH**	**Time:**	**15:25:34**
EUT:	**Rope Skipping Auto Detection System**	**Test By:**	**Jimly Chen**
Model:	**PL-007**	**Distance:**	**3m**
Note:	**ON**		



No.	Frequency	Reading	Correct	Result	Limit	Over Limit	Detector	Height	Degree
	(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)		(cm)	(deg)
1	1005.508	46.68	-14.28	32.40	74.00	-41.60	peak		
2	1005.508	23.13	-14.28	8.85	54.00	-45.15	AVG	100	0
3	1444.893	43.89	-9.59	34.30	74.00	-39.70	peak		
4	1444.893	19.26	-9.59	9.67	54.00	-44.33	AVG	100	360
5	1839.934	46.87	-6.84	40.03	74.00	-33.97	peak		
6	1839.934	14.21	-6.84	7.37	54.00	-46.63	AVG	100	0